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fall migrants on the lake. The latter species is new to the state. He possesses an excellent mounted specimen of the Trumpeter Swan (*Olor buccinator*), which occurs in this region, as recently recorded by Mr. H. K. Coale (*Auk*, xxxii, 1915, p. 87.) There seem to be no published records of the Great Gray Owl (*Scotiaoptex nebulosa nebulosa*) from the state, but Mr. Stanford has a mounted bird and states that the species is not uncommon about Kalispell in winter and that he has seen it in summer.

One change should be made in the subspecies of one of the birds breeding at Flathead Lake. A male Golden-crowned Kinglet, taken at Yellow Bay, June 25, proves to be the western bird (*Regulus satrapa olivaceus*), as identified for me by Dr. L. B. Bishop. This is the first bird of this species that I have taken in the state during the breeding season, but its subspecies is the same as that of fall migrant birds taken in other parts of the state.

I have questioned above the subspecies of Junco found here. Mr. Sillaway listed it as the Shufeldt Junco (*Junco hyemalis connectens*), but the A. O. U. *Check-List* includes this region in the range of the Montana Junco (*J. h. montanus*). The birds as seen in the field certainly look like the Shufeldt, but I have taken no specimens.

I have also questioned the subspecies of Orange-crowned Warbler, and believe that the subspecific identities of a number of other species should be questioned. Flathead Lake, in addition to being west of the continental divide, is in a much more humid region than any other part of Montana, being more like northern Idaho and northeastern Washington in this respect. I would not be surprised to find that the subspecies of many such birds as the Orange-crowned Warbler, Song Sparrow, Towhee, Chickadee, Horned Lark, and Red-winged Blackbird are not what they were first reported to be, but are more like those of northern Idaho.

West Haven, Connecticut, February 16, 1915.

AN APPARENT HYBRID BETWEEN SPECIES OF THE GENERA *SPATULA* AND *QUERQUEDULA*

By H. S. SWARTH

WITH ONE PHOTO

(Contribution from the Museum of History, Science and Art)

THE LOS ANGELES Museum of History, Science and Art has recently received as a gift a specimen of a duck presenting certain peculiar features. The bird was given to the Museum by Mr. A. E. Jackson, who shot it December 13, 1914, on the grounds of the Crescent Gun Club, near Del Rey, Los Angeles County, California. It was sent to the Museum in the flesh, and there made into a study skin.

The general appearance of the bird is such as strongly to suggest the possibility of its being a hybrid between the Shoveller (*Spatula clypeata*) and one of the species of *Querquedula*, the Cinnamon Teal (*Q. cyanoptera*) or the Blue-winged Teal (*Q. discors*). It is a male, but in the mottled plumage of the immature, and is probably a bird of the previous spring.

Coloration and markings are as follows: Chin and throat, immaculate, pale pinkish buff; sides of head, and sides and front of neck, with ground color of the same, thickly streaked and speckled with dusky; top of head dull blackish, the feathers narrowly edged with pinkish buff. The dusky of the top of the head merges into drab gray along the median line of the back of the neck. The feathers of the back are mostly plain blackish, unmarked, but with these there are other feathers intermixed, apparently remnants of the disappearing immature plumage, of the same ground color, but with edgings and crescentic cross markings of pale pinkish buff. Ground color of upper breast buffy, the feathers with blackish centers and broad, blackish, encircling ellipses. On the lower breast, abdomen and crissum, the ground color becomes decidedly reddish, close to brick red, and the dusky markings are isolated spots. A spot is present on nearly every feather. Sides and flanks with larger blackish

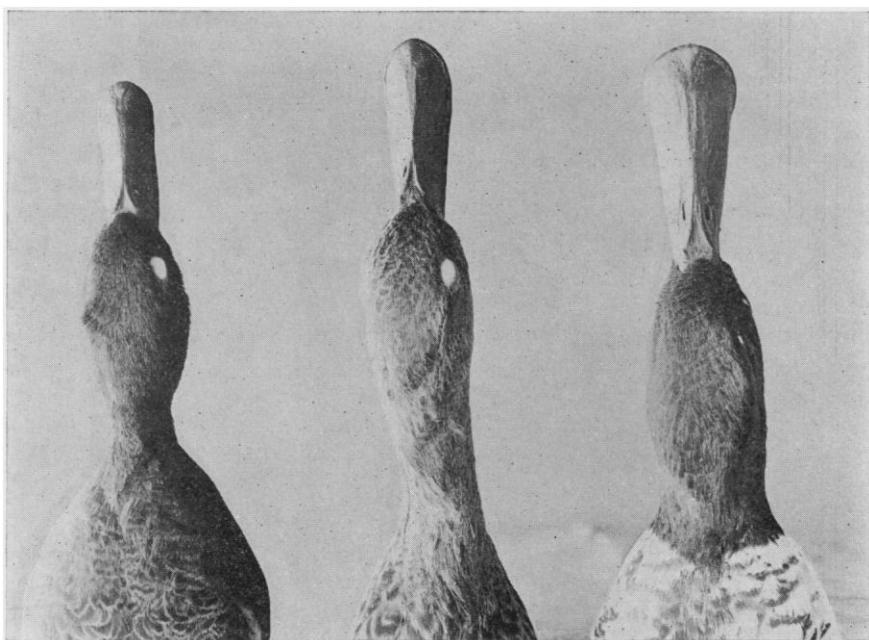


Fig. 44. FROM LEFT TO RIGHT: CINNAMON TEAL, SUPPOSED HYBRID, AND SHOVELLER; SHOWS RELATIVE SIZE AND PROPORTIONS OF BILL OF EACH

spots, and broad crescentic barring of dusky and buffy. In the under tail coverts new feathers are appearing, some black, others with fine vermiculations of white and black, or barred with black and buff. There is appearance as of a pure white area developing on either side of this tract.

The wings of the male Blue-winged and the Cinnamon Teal appear to be alike, and both seem to be indistinguishable in color and markings from the Shoveller. The bird under consideration has the wing of the same general type, blue lesser coverts, with narrow white band, and metallic green speculum. Bill blackish, feet yellowish, as in the immature male Shoveller. The bird is undergoing molt over much of the body, there being many old feathers on the back and a few on the breast. The lateral rectrices are old and frayed, but the central pair are new, and still partly ensheathed.

There is but little distinctive in the coloration of this bird to be seized upon as definitely determining its relationships, though its size and proportions are such as at once to attract attention. It is rather singular that upon careful analysis of colors and patterns there appears to be such a lack of recognizable characters of this sort serving to distinguish immatures of such widely different birds as are the Shoveller and the Cinnamon and Blue-winged Teals. The specimen in hand, an immature male, is in general appearance most suggestive of the Shoveller, but in coloration and pattern exhibits nothing that might not be included in the range of variation in any one of these species. The bill, of course, is the striking feature, for although less exaggerated than in the Shoveller, it is still of unwieldy size.

In the accompanying table of measurements comparison is made between the supposed hybrid and adult males of *Spatula clypeata*, *Querquedula cyanoptera*, and *Q. discors*. Analysis of the figures is of interest. The two teals are of approximately the same size, and it will be noted that the bird in question in its general proportions occupies a position almost exactly intermediate, between the teals on the one hand, and the Shoveller on the other. There are certain slight differences in measurements between the two species of *Querquedula*; and in every particular save in bill measurements our bird is nearer to *discors* than to *cyanoptera*. It would be unsafe to draw any inferences as to its parentage from this alone, however, for the crossing of the Cinnamon Teal with the Shoveller would naturally result in a bird somewhat larger than the former, hence in size rather nearer to *discors*. The foot measurements of the supposed hybrid are noteworthy, for though a relatively large bird, as compared with the teal, these measurements are almost exactly as in *discors*.

MEASUREMENTS IN MILLIMETERS OF ADULT MALES OF SHOVELLER, CINNAMON TEAL, BLUE-WINGED TEAL, AND SUPPOSED HYBRID

| | <i>Spatula</i> <i>clypeata</i> no. 415 ¹ | <i>Querquedula</i> <i>cyanoptera</i> no. 473 ¹ | <i>Querquedula</i> <i>discors</i> no. 3955 ² |
|--|---|---|---|
| Length of wing..... | 243 | 200 | 179 |
| Length of tail..... | 85.5 | 70 | 62 |
| Exposed culmen..... | 67.2 | 50 | 44 |
| Length of bill from anterior end of nostril..... | 49 | 39.5 | 34.2 |
| Greatest width of bill..... | 29.8 | 21 | 18 |
| Width of bill at narrowest point..... | 14.5 | 13.5 | 17 |
| Depth of upper mandible at base..... | 15.8 | 15 | 14.2 |
| Length of tarsus..... | 37 | 32 | 33 |
| Length of middle toe without claw..... | 43 | 38 | 39.5 |
| | | | 37 |

¹Collection of Museum of History, Science and Art.

²Collection of F. S. Daggett.

Though the coloration of this bird is, as stated above, of an undecisive nature, there is one feature that is worth notice. The appearance of the lower breast and abdomen, reddish ground color with black spots, is at once suggestive of the adult male of the Blue-winged Teal, and in fact it is very closely similar to the markings in the single bird of that species I have had for comparison.

After all, however, details of coloration do not help much, for in any case a mixed parentage, with the Shoveller on one side, and either of the teals of the genus *Querquedula* on the other, might produce the result before us. It seems safe to say, though, that some one of these combinations must have occurred. Only the Shoveller could have produced such a bill, modified as it is, and only

the combination of a teal with the Shoveller could have caused the general reduction in size. Also it seems safe to say that had the teal been of the genus *Nettion* some one of the distinctive peculiarities of that group would have appeared in the offspring.

In southern California the Blue-winged Teal is such a rarity that one is apt to jump to the conclusion that the bird in hand must be the result of the combination of the Cinnamon Teal and the Shoveller. If this bird were known to have been hatched in the same general region in which it was shot this assumption might be justified, but as it may well have been a migrant from farther north, where the Blue-winged Teal breeds, it is unsafe to draw such a conclusion.

Among the ducks aberrant individuals combining the characters of two distinct species are of not uncommon occurrence, and from the way in which the Anatidae have been divided generically, this usually means hybridization between distinct genera, rather than merely between species of the same genus. Several combinations have been recorded from time to time, perhaps the most common being the mixture of the features of the Mallard (*Anas platyrhynchos*) and the Pintail (*Dafila acuta*). Usually such individuals have been regarded as the offspring of diverse parentage, as "hybrids" in fact, rather than as "mutants", suddenly developing peculiar characters. The present writer has examined perhaps ten or twelve such doubtful birds, and in each case the theory of hybridization seemed to be the more plausible explanation of conditions.

The arguments already set forth by Allen (*Science*, n. s., vol. 22, 1905; pp. 431-434) in similar cases among other groups of birds, apply with equal force to the ducks. Among the ducks there is an added factor, as with these birds more than with any others there is the possibility of crippled birds being forced to remain at points outside the normal breeding range, among individuals of other species. In such cripples loss of flight is frequently the only disability, the birds being otherwise strong and healthy, and under such conditions it is not extraordinary that there is occasional indiscriminate pairing of individuals belonging to different races.

Museum of History, Science and Art, Los Angeles, California, February 6, 1915.

AN ANNOTATED LIST OF THE BIRDS OF KOOTENAI COUNTY, IDAHO

By HENRY J. RUST

WITH MAP AND FOUR PHOTOS BY THE AUTHOR

KOOTENAI County comprises a larger portion of northern Idaho known as the Panhandle. It is bounded on the north by Bonner County, which was created by cutting off the northern half of Kootenai County, on the east extends almost to the Montana boundary line, and is bounded on the west by the State of Washington.

There is but little level prairie land in the County; of fifty-nine townships, less than four are level and about two rolling prairie, the balance being hilly or mountainous.